UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,416	09/06/2005	Viktor Nikolaevich Bakunin	I99.12-0001	3712

27367 7590 08/14/2009

WESTMAN CHAMPLIN & KELLY, P.A.
SUITE 1400
900 SECOND AVENUE SOUTH
MINNEAPOLIS, MN 55402

EXAMINER	
GOLOBOY, JAMES C	
ART UNIT	PAPER NUMBER
1797	

MAIL DATE	DELIVERY MODE
08/14/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/532,416	BAKUNIN ET AL.	
	Examiner	Art Unit	
	James Goloboy	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 June 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's amendment filed 6/5/09 overcomes the rejection over Singerman and Anglin in the office action mailed 1/9/09, but fails to overcome the rejection over Devries in view of Brewer. The rejection over Singerman in view of Anglin and Pan is now applied to claims 1-6, as necessitated by the amendment.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims1-6 have been amended to require that the polar solvent be non-aqueous. There is no support for this limitation in the application as originally claimed. While specific non-aqueous polar solvents are recited, this does not provide support for the broad class.

Claim Rejections - 35 USC § 103

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Devries in view of Brewer.

This rejection is adequately set forth in paragraph 3 of the office action mailed 6/5/09, which is incorporated here by reference.

5. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Singerman in view of Anglin and Pan.

In column 1 lines 13-17, Singerman discloses lubricating oils comprising a minor amount of a tetrahydrocarbyl thiomolybdate. In column 2 lines 15-29 Singerman discloses suitable tetrahydrocarbyl thiomolybdates, some of which meet contain tetrahydrocarbyl groups within the scope of the first modifier of claim 1, such as hexdecyltrimethylammonium. In example 1 (column 5 lines 35-56), Singerman discloses that the tetrahydrocarbyl thiomolybdates are formed by reacting an alkali metal molybdic acid salt with a tetraalkylammonium salt, as in the first step of claim 1. In example 3 (column 6 lines 7-37), Singerman discloses that the tetrahydrocarbyl thiomolybdates are combined with a succinimide dispersant, meeting the limitations of adding the second modifier of claim 1. From column 4 line 67 through column 5 line 2, Singerman discloses that the alkali metal thiomolybdates are prepared from a alkali metal molybdate and hydrogen sulfide, meeting the limitations of the molybdic acid salts and sulfur donor of claim 2. The differences between Singerman and the currently presented claims are:

i) Singerman does not disclose a sodium or ammonium thiomolybdate reactant.

ii) Singerman does not disclose thermally processing the thiomolybdate with the tetraalkylammonium modifier.

iii) Singerman does not disclose the non-aqueous polar solvents recited in claims 1-6.

With respect to i), Anglin teaches in column 2 lines 23-29 that sodium and ammonium thiomolybdates, as recited in claim 1, are suitable starting materials for forming tetrahydrocarbyl thiomolybdates.

With respect to ii), Anglin teaches in column 3 lines 23-26 that temperature is not a critical factor in the reaction. It is therefore the examiner's position that the reaction can include thermal processing, as recited in claim 1. As Anglin teaches in column 3 lines 46-49 that the products are stable up to 170-200º C, the reaction could be carried out at temperatures meeting the limitations of claim 3 and 5. While Anglin discloses that it is "convenient" to carry out the reaction at room temperature, this does not constitute a teaching away from performing the reaction at elevated temperature.

With respect to iii), from column 3 line 66 through column 4 line 10, Pan discloses the conversion of ammonium thiomolybdate to tetrahydrocarbyl thiomolybdates in methanol, meeting the limitations of the solvent of claims 4 and 6.

It would have been obvious to one of ordinary skill in the art to form the tetrahydrocarbyl thiomolybdates of Singerman from sodium and ammonium thiomolybdates, as taught by Anglin, as Anglin teaches that they are equally suitable starting materials. It would have been obvious to perform the reaction with thermal processing, as Anglin teaches that the temperature of the reaction is not critical, and a

higher temperature would lead to a faster reaction. It would have been obvious to one of ordinary skill in the art to use the methanol of Pan as the solvent, in order to avoid using the complex two-phase mixture of Singerman and Anglin.

Response to Arguments

6. Applicant's arguments have been fully considered but they are not persuasive. With respect to Devries and Brewer, applicant argues that that the starting molybdenum-containing reagent of Devries is different than that of the claim. However, the molybdenum-containing reagent of Devries does meet the limitations of the claimed reagent when x is 0. While Devries does not teach oxythiomolybdates this is not required in the claim. Applicant also argues that Devries teaches that water is a particularly preferred polar promoter. However, this does not constitute a teaching away from the other suitable promoters, including ethylene glycol which is taught as preferred. Devries explicitly teaches that "a wide variety" of polar promoters can be used. One of ordinary skill in the art would have had a reasonable expectation of success in using any of the “typical” polar promoters of Devries. Some of the other polar promoters of Devries have boiling points within the range of reaction temperatures recited in the claim. Applicant also points out that the method of Devries also has several requirements not recited in the claimed process, however those requirements are not excluded by the current claims either.

With respect to Singerman, Anglin, and Pan, applicant argues that the solvent of Singerman includes water but this is rectified by the use of the methanol solvent of Pan. Applicant argues that the lubricating composition of Singerman requires zinc dialkyldithiophosphate, which is not recited in the current claims. However, as the current claims are directed only towards the molybdenum-containing additive and not lubricating compositions, this clearly does not distinguish the claims over the prior art. Even if a lubricating composition comprising the molybdenum-containing additive were recited, it would not overcome the rejection unless zinc dialkyldithiophosphate were excluded, which would not be supported in the application as originally filed. Applicant argues that the hydrogen sulfide of Singerman does not meet the limitations of the claimed sulfur donor, but the hydrogen sulfide does meet the limitations of an inorganic sulfide, while applicant's argument applies only to the polysulfide with the formula specified in the claim.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Goloboy whose telephone number is (571)272-2476. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JCG

/Glenn A Caldarola/
Acting SPE of Art Unit 1797